

## SYSTEMATIC NOTES ON VICTORIAN COMPOSITÆ—1

by

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### OLEARIA.

#### SUMMARY:

Limitations in the use of indumentum as a basis for classification are discussed; two new varietal combinations are made under *O. ramulosa* (Labill.) Benth. (*O. stricta* Benth. being reduced in rank); three varieties of *O. ramulosa* and one of *O. floribunda* (Hk.f.) Benth. are described as new; *O. exilifolia* (F. Muell.) Benth. is admitted as a species new to Victoria; the combination of *O. frostii* is made for the first time (based on *Aster Frostii* F. Muell.); *O. toppii* Ewart & White is reduced to a synonym of *O. passerinoides* (Turcz.) Benth. *O. quercifolia* Sieb. ex DC. is deleted from the Victorian flora (records were based upon mis-determinations) and two new varietal combinations are made under *O. phlogopappa* (Labill.) DC.—the legitimate name for the plant generally known as *O. gunniana*.

As in other large genera, where floral and fruiting structures are remarkably uniform, it has been found convenient to divide *Olearia* into sections delimited by the principal types of indumentum. G. Bentham [*Flora Australiensis* 3: 464-7 (1866)] defined five such sections which have been later recognized by F. M. Bailey (1900), J. M. Black (1929), C. A. Gardner (1930) and A. J. Ewart (1930), viz.:

*Dicerotriche* (leaves silvery-shining or woolly beneath from the matted and centrifixed hairs), *Asterotriche* (leaf surface scurfy beneath with stellate hairs), *Eriotriche* (leaves with dense and intricate woolly hairs on the under-surfaces), *Adenotriche* (plants glabrous and usually glutinous; involucre rarely hemispherical, bracts rarely acute), and *Merismotriche* (plants various but hair, when present simple, rigid and septate; involucre hemispherical, bracts usually acute).

It will be noted that the first three sections depend entirely upon the vestiture on the under-surfaces of the leaves, and usually there is no trouble in deciding whether specimens belong to one or other of these groups; but difficulties are met in the remaining two sections which are mixed assemblages, depending upon *general* indumentum (or its absence) and involucre characters. For instance, several plants referred by Bentham to these last sections certainly have a few intricate woolly hairs on the under surfaces of the leaves and would thus qualify also for the section *Eriotriche*.

***Olearia ramulosa*** (Labill.) Benth. has been a stumbling-block to botanists for more than a century, defying accurate definition and shattering all ideological concepts of a "species". Bentham placed it in the *Eriotriche* without comment, but the elements included by him under this name display the most astonishing diversities and blendings of indumentum.

Within the orbit of *O. ramulosa* (*sensu lato*) are three principal types of hair—*intricate-woolly*, *septate-bristly* (often short, stout and thorn-like setæ) and *glandular* (glands globular and either on long

irregularly septate bases or almost sessile). Each type may predominate (with the other two suppressed or absent) on a particular plant: two may be equally well developed (with the third suppressed) or these three types of hair may be conspicuous on a single specimen; but in *all* cases the under-surfaces of the leaves invariably bear some intricate woolly hairs. To complicate matters, one branchlet may show gradations between the long, slender, regularly and simply septate bristle to the shorter, stouter, irregularly septate kind (often with longitudinal septation as well) which may or may not bear a terminal gland. Coincident with these various admixtures of tomentum one finds every combination in size and roughness of leaves, size and distribution of heads along the branches, size, colour and number (5–15) of ligulate florets. The number of possible combinations between indumentum, leaves and flower-heads is almost without limit and would provide any "species splitter" with a fertile field for activity!

Older botanists (chiefly A. P. De Candolle) had segregated seven species from the material which Bentham later included under *O. ramulosa*. As far as Tasmania was concerned (the type area for both *Aster ramulosus* Labill. and *A. aculeatus* Labill.), J. D. Hooker recognized only one species in the complex, viz. *Eurybia ramulosa* (Labill.) DC.; but he described eight varieties [*Fl. Tas.* 1: 178 (1855)] and then made the extraordinary pronouncement:

The varieties enumerated are not distinct forms, I fear, and some may very probably have been gathered from one individual.

Labillardiere's *Aster aculeatus* became the eighth variety (*aculeata*) and evoked the following comment:

An original specimen of *E. aculeata* from Labillardiere's herbarium, communicated by Webb, has the upper surface of the leaf quite glabrous and smooth, though described and figured by Labillardiere himself as muricated.

In the *Flora Australiensis* [3: 477 (1866)], Bentham recognized only two varieties of *O. ramulosa*, i.e. var. *microphylla* (based on *Aster microphyllus* Vent.)—a slender plant with small obovate to spatulate and petiolate leaves, extending from Port Jackson north-west through the Blue Mountains to as far as the Dunedoo district, N.S.W.—and var. *communis* which embraced all other forms. He was puzzled by the latter complex and wrote on a covering sheet in the Melbourne Herbarium, "the species all run into one another so much, I can make very little of them". Ewart [*Flora Vict.* 1116 (1930)] admits only one variety for this State, viz. *microphylla*, but no Victorian specimens of this distinctive Port Jackson plant (perhaps worthy of specific rank?) exist in the Melbourne Herbarium and its occurrence so far south is extremely doubtful. Black [*Fl. S. Aust.* 4: 599 (1929)] has no varieties, but comments as follows:

The ligules of South Australian specimens vary from slightly longer than the style branches to three times as long and both organs vary in size, even on the same plant.

Throughout coastal and southern Victoria (from the Genoa River to the Glenelg) are populations with 5–10 whitish ligules in the heads (usually small, numerous and racemosely arranged), with the leaves 2–10 mm. (even on one plant) and varying from smooth to finely aculeate all over, and an indumentum that variously combines short and scattered thorn-like bristles with appressed woolly-white hairs. These I would consider as mere forms of *Olearia ramulosa* (including *Aster aculeatus*) in the stricter sense. But the question arises, can one recognize in Victoria any other populations within the general circumscription of *O. ramulosa* which may be distinguished from the eight Tasmanian variants described (and immediately queried) by Hooker?

After examining considerable material in field and herbarium, I believe that at least five entities are recognizable and that it is desirable to define these extremes as varieties, while freely admitting the possibility of intergradation between them. All but one (var. *microcephala*) are very hairy shrubs inhabiting rocky terrain in mountainous country on and north of the Dividing Range; these will now be discussed briefly:

1. *O. RAMULOSA*, var. *MICROCEPHALA* (Benth.) J. H. Willis, *combinatio nova*.

*O. hookeri* (Sond.) Benth., var. ?*microcephala* Benth. in *Fl. Aust.* 3: 483 (1866).

The author of this varietal epithet, by his query, evinced uncertainty concerning its correct application under *O. hookeri*—a glabrous and exceedingly glutinous, apparently rare, Tasmanian shrub, having close, narrow, obtuse, rigidly erect, slightly recurved and shortly decurrent leaves. Type of the variety was collected by J. Dallachy on the "Murray River" (probably in N.S.W. near Mildura) and certainly bears little resemblance to the Tasmanian species with which Bentham allied it. The minute leaves (1–2 mm. long) are broad, widely spreading, non-decurrent, hairy beneath and with only rudimentary aculeations; these features, together with the branchlet indumentum (of woolly appressed hair and a few sessile viscid glands), point to close affinity with *O. ramulosa*, not *O. hookeri*. I have little doubt that Dallachy's type specimen, in Melbourne Herbarium, is an abnormally reduced (perhaps aberrant) condition of a small-leaved form of *O. ramulosa* which ranges along the Murray and lower Darling Rivers; the same extreme in leaf reduction is sometimes observed in such species as *Helichrysum semipapposum* from the north-west of the State—often as shoots on a plant with otherwise normal foliage. The varietal name is rather unfortunate, since mature heads of this inland shrub are no smaller than in the more typical coastal populations of *O. ramulosa*. *O. hookeri* must now be deleted from the Victorian flora; but Mrs. Enid Robertson (formerly of Waite Institute, Adelaide University) recently showed me a fragmentary specimen of the late J. M. Black's from "Murray Lands", S. Aust., which does conform in vegetative characters to the Tasmanian *O. hookeri*.

2. *O. RAMULOSA*, var. *STRICTA* (Benth.) J. H. Willis, *status novus et combinatio nova*.

*O. stricta* Benth. in *Fl. Aust.* 3: 485 (1866).

The original description of *O. stricta* was based on a single collection of F. Mueller's from Mt. Buffalo ("Mt. Aberdeen") and Bentham quotes the elevation as 4000 feet. There is no specimen in Melbourne Herbarium, bearing a label with this altitude; but the diagnosis perfectly fits a series of specimens with the following label in Mueller's handwriting:

"Frutex strictus 1-3' altus. Radius lilacinus. Flor. fragrant. In montis Aberdeen summitatibus granítico-rupestribus tract. Buffaloi rangi. 26 Febr. 1853."

The rocky summit of "Mt. Aberdeen" (now The Horn) is 5646 feet, and despite the altitudinal discrepancy, I haven't the slightest doubt that the specimen Bentham saw was part of this collection in Melbourne. Bentham located the species in section *Merismotriche* (next to the longer leaved *O. tenuifolia* and *O. adenophora*) on account of its very glandular indumentum, but a little woolly hair and a few non-glandular setæ (especially on the leaves) are also present, and the affinities of *O. stricta* are far too close to *O. ramulosa* for specific separation. At best I consider that the Mt. Buffalo plant represents an extreme local development of the more hairy condition of *O. ramulosa*, in which nearly all the hairs have become glandular. Identical populations exist on Mt. Cobbler plateau to the south and along the sandstone-conglomerate portion of the Barry Mountains (Viking, Razor and Speculation peaks where I noted them in January 1945). In all these areas, there is a tendency to lobing in a few of the lower, less revolute leaves, while the numerous (10-15) ligulate florets are usually rich blue in colour.

Near the original shrubs of *O. stricta*, Mueller also collected at The Horn (5000 feet) samples which are more typically *O. ramulosa*; the latter, apparently not seen by Bentham, have an indumentum of much wool, stout setæ and a few almost sessile glands. In the Cudal district, west of Orange (N.S.W.), G. W. Althofer collected (1949) examples of otherwise typical *O. stricta* in which the glands were all practically sessile.

Near Elmhurst (north of Mt. Cole ranges) and on the Black Range south of Horsham, Vic., occurs a plant which can only be referred to *O. ramulosa*, var. *stricta* (comb. nov.): it has the same aspect (very scabrid) and numerous blue ligulate florets, but long setiferous hairs are developed equally with the shorter gland-tipped ones, and every gradation may be observed between the two kinds of hairs.



3. *O. RAMULOSA*, var. *LONGISETOSA* J. H. Willis, *varietas nova*.

Frutex diffusus laxus, ramis tenuibus, capitibus et sæpe foliis dispersis, ligulis 9–12 cæruleis; hæc varietas ab aliis formis speciei vestimento longisetoso (et porro involucri squamas involvente, sed sine pilis glanduliferis) distinguitur.

HOLOTYPUS (in MEL): *Victoria occidentali*, a Mt. Byron Trig. (Black Range, in Paroecia Daahl) circ. 3 km. [2 mil.] septentrionem versus—"in gully head, among standstone rocks." J. H. Willis, 5 Mar. 1948.

This variety has a hoary aspect from the very long (to 1.5 mm.) simply septate, setiform hairs which copiously beset the leaves and branches, standing out at right angles to their surfaces. A little appressed woolly hair is also present, but no glands occur, and the numerous ligules are bright blue. Gland-bearing (and with setæ also) shrubs referable to var. *stricta* occur in the same district; but the new variety seems to be confined to sandstone rocks of the Grampians system, e.g. the Black Range, at the southern end of the Victoria Range (H. L. Tucker, Oct. 1944), also on the Dundas Range near Cavendish and on Mt. Zero at the northern extremity of the Grampians (J. H. Willis, July 1950).

A collection in Melbourne Herbarium labelled "Grampians" (J. W. Audas, 1914) formed the basis of *O. ramulosa* var. *intermedia* A. J. Ewart, published as a *nomen nudum* in *Proc. Roy. Soc. Vict.* n.s. 27: 302 (March 1915). Ewart was mistaken in believing the plant to be intermediate in character between *O. ramulosa* and *O. ramulosa* var. *microphylla* (Vent.) Benth.; it is very close to the new variety *longisetosa*, having setiform hairs without glands and blue ligulate florets, but the flower-heads are rather smaller, with fewer ligules, and the setæ do not extend over the involucre bracts. At the Hall's Gap camping ground and on the banks of Fyan's Creek, Mr. T. E. George found (23.12.1953) a remarkable setose form of *O. ramulosa* with a strong curry-like odour, which is still apparent in the dried specimen (Herb. Melb.). This plant is similar to the Audas collection discussed above; but the 3–5 ligulate florets are white. Another approach to var. *longisetosa* is found in coastal specimens from near Robe, South Australia; these have bluish ligules and dense, longish setæ without glands, but the leaves are only moderately aculeate and there is an admixture of much more woolly hair on the branchlets.

4. *O. RAMULOSA*, var. *RIGIDA* J. H. Willis, *varietas nova*.

Frutex 1–2 m. altus, rigide multo ramosus, capitibus densis, ligulis 5–7 albis; ab aliis formis speciei ramulorum indumento præcipue setoso (sed etiam pilos paucos glanduliferos lanatosque ferente), foliis longis (usque 1.2 cm.) rigide expansis (sæpe deflexis) multo revolutis superne lævibus et minute aculeatis, capitibus confertis in racemis longis gracilibus terminalibus differt.

HOLOTYPUS (in MEL): *Victoria boreali-orientali* ad Lima East (a Benalla meridiem versus). Mrs. Evans, 27 Nov. 1917.

The long, stiffly spreading leaves and white flower-heads, densely massed in elongated racemes, give a very distinctive appearance to this scabrid variety which is known only from the vicinity of the Strathbogie

Ranges in the north-east of Victoria. A second collection at Melbourne Herbarium carrying the label "Rocky summits of granite mountains between Nine-mile Creek and Broken River" was obtained by F. Mueller on 10th February 1853.

5. *O. RAMULOSA*, var. *TOMENTOSA* J. H. Willis, *varietas nova*.

Ab omnibus formis speciei differt ramulorum foliorumque indumento copioso albido-tomentoso (pilos glanduliferos setiformesque obscurante); folia usque ad 1.2 cm. longa, breviter, sparse aculeata, fere multo revoluta; capita sæpe magna axillaria; ligulæ 5–7. magna, lilacinæ.

HOLOTYPE & PARATYPI (in MEL.): Victoria centrali. "Mt. McIvor, Nov.". ?F. Mueller.

Noteworthy for its long leaves and extreme development of white woolly hair, this variety also exhibits a few setæ and sessile glands on the branchlets and foliage. It is apparently restricted to central-western Victoria in the vicinity of the Divide, two other old collections in Melbourne Herbarium being labelled "Loddon Ranges" and "Scrubby Places on the Campaspe River."

*Olearia floribunda* (Hk.f) Benth., var. *LANUGINOSA* J. H. Willis, *varietas nova*.

A planta typica tasmanica (etiam a forma alpina continenti) differt ramuli indumento dense tomentoso quod sæpe foliorum fascies breves involvit.

HOLOTYPE (in MEL.): Australia Meridionali, ad Murray Bridge. J. H. Maiden, Jan. 1907.

The type of *Olearia floribunda* was collected by R. C. Gunn in Tasmania on the "banks of rivers" (Derwent, etc.) and was described as differing from *O. lepidophylla* (Pers.) Benth.—also Tasmanian—in its furfuraceous, *not* tomentose branches, as well as in the larger and more distant leaves [see J. D. Hooker in *Lond. J. Bot.* 6: 109 (1847)]. *O. lepidophylla* has crowded subrotund, shining and bubble-like leaves which are often deflexed (lying close against the white-woolly branchlets) and typically about 1 mm. long; another significant difference is that it has larger heads and more numerous ligulate florets (6–10) than in *O. floribunda* (3–6). Both species tend to have the foliage disposed in small fascicles, which probably represent abbreviated lateral branches.

In Melbourne Herbarium are a number of specimens (from Tasmania, Victoria and South Australia) which F. Mueller and others had determined as "*O. lepidophylla*", doubtless because of their woolly indumentum; but the narrower, not noticeably deflexed leaves and fewer ligules in the heads (3–4) indicate a much closer relationship to *O. floribunda* with which they should be included. I have found that, throughout its range, *O. floribunda* varies considerably in the development of a hairy indumentum. The typical riverside form shows a little woolly hair mixed with much scurfy material (probably an exudation from glands along the branches), but exclusively scurfy and moderately woolly conditions are co-extensive in Tasmania.

In Victorian highland localities, we find less scurf and more wool, otherwise the plants are practically identical with Tasmanian riparian populations, while in Mallee areas of Victoria and South Australia (extending to Eyre Peninsula) are forms having an extremely woolly indumentum which invests the foliage and involucre bracts also—capitula may actually appear to be embedded in wool along the thickened branches, giving a curious *Lachnostachys*-like aspect to the little shrubs.

So distinctive is this very tomentose Mallee form of *O. floribunda* that I deem it worthy of recognition and have designated it as the variety *lanuginosa* (above).

*O. floribunda* occupies almost an intermediate position systematically between *O. lepidophylla* and *O. ramulosa*, and in eastern Victoria are populations which verge toward the latter species in their longer (but still fasciculate) leaves and rather more numerous ligules (5–7). It is remarkable that all three species discovered originally under the cool climatic conditions of southern Tasmania, should be represented by forms adapted to the Murray Mallee with long dry summers and a rainfall of only 10–15 inches.

***Olearia exilifolia* (F. Muell.) Benth. in *Fl. Aust.* 3: 476 (1866).**

WESTERN AUSTRALIA—Great Australian Bight: "N.E. side white sand patch, 60 miles from the Bellingers (east), shrubs 4 feet", G. Maxwell, 1863 (LECTOTYPE in MEL); "Under the Bank, pts. 3 feet, limestone", G. Maxwell 1863 (PARATYPE in MEL).

VICTORIA—Grampians region: Daah Parish, Black Range, 2 miles north of Mt. Byron, Trig. in heath formation over weathered sandstone, J. H. Willis, 5 Mar. 1948 (MEL).

The discovery of this little-known species in the Black Range, south of Horsham, constitutes the first recorded occurrence for eastern Australia, where its habitat is quite dissimilar from that obtaining in the Australian Bight. C. A. Gardner [*Enum. Pl. Aust. Occid.* 131 (1930)] synonymises both *O. exilifolia* and *O. revoluta* F. Muell. ex Benth. under *O. ramulosa* (Labill.) Benth., and J. M. Black [*Fl. S. Aust.* 4: 599 (1929)] in discussing *O. ramulosa* remarks that it "should probably include . . . *O. exilifolia*, F.v.M." I am unable to endorse these opinions and consider that *O. exilifolia* diverges sufficiently from all of the many *O. ramulosa* variations to be accorded specific rank. Attention has already been focused on the difficulties of drawing a line between one species and another in this complex; but to broaden the circumscription of *ramulosa*, enough to include *exilifolia*, would surely involve the coastal *O. axillaris*, and then why not also *O. tubuliflora*, *O. floribunda* and even *O. lepidophylla*?

It is doubtful whether *O. ramulosa* extends into Western Australia at all, but Bentham's *O. revoluta* is a puzzling plant of western coasts which seems intermediate between *ramulosa* and *axillaris*—the white rays are conspicuous, although not as long as in *ramulosa*, and Mueller labelled his specimens "*O. axillaris*, var. *radiatus*". *O. revoluta*, var.

*minor* Benth. (southern coast, W.A.) closely approaches *exilifolia* in its more diminutive leaves and heads and reduced number of florets (3–5), but again the rays are white and longer than in the latter. I am uncertain what to do with *O. revoluta*; it is neither *ramulosa* nor *axillaris* in the accepted sense, and is perhaps best maintained for the present as a convenient "half-way" species with very hazy margins.

*O. exilifolia*, as represented in Victoria, conforms very well to the West Australian type, although the leaves are longer. It is an erect trim shrub to 5 feet, with small nearly smooth leaves, small massed yellowish and sweetly scented capitula. The total number of florets per head is low (3–7), with only 1–3 pale yellow ligulate ones; each ligule is only about 2 mm. long and therefore quite inconspicuous. The branch indumentum consists almost entirely of appressed but rather coarse, intricate woolly hairs; a few glandular swellings (incipient setæ?) are also present.

***Olearia frostii* (F. Muell.) J. H. Willis, *combinatio nova*.**

*Aster frostii* F. Muell. in *Victorian Naturalist* 6: 167 (Mar. 1890);

*O. stellulata* DC., var. *Frostii* Ewart in *Fl. Vict.* 1114 (1930).

VICTORIA—Summit of Mt. Hotham (6000 ft.), C. French Jun., Jan. 1890 (LECTOTYPE & PARATYPES in MEL); various collections from the Bogong High Plains (MEL).

The name "*Olearia frostii*" has been used by several writers and attributed to F. Mueller; but I can find no evidence that Mueller ever made use of this combination, which seems never to have been validly published. *O. frostii* is a distinctive robust shrublet (up to 2 feet high) with rather large heads (2–3 cm. wide), borne singly on the branches or a few together. The mauve-coloured rays are numerous and conspicuous, while the whole plant (branches, foliage and involucre) is beset with a copious woolly indumentum. It is an abundant species between Mts. Hotham and Bogong, at elevations exceeding 5000 feet and would appear to be endemic in this region. This and such other large-flowered Victorian daisy-bushes as *O. pannosa* (white), *O. rudis* (blue) and *O. magniflora* (rich purple) are subjects worthy of garden culture.

***Olearia passerinoides* (Turcz.) Benth. in *Fl. Aust.* 3: 482 (1866).**

*Diplopappus passerinoides* Turcz. in *Bull. Soc. Imp. Nat. Mosc.* 24, pt. 2: 63 (1851);

*Eurybia glutescens* Sonder in *Linnaea* 25: 462 (1852);

*Aster vernicosus* F. Muell. in *Fragmenta Phyt. Aust.* 5: 67 (Oct. 1865);

*Olearia toppii* Ewart & White in *Proc. Roy. Soc. Vict.* n.s. 21: 543 (1908);

*O. glutinosa* sens. J. M. Black (1929), etiam Benth. p.p. (non *Eurybia glutinosa* Lindl., 1839).

As LECTOTYPE of *O. toppii* Ewart & White, I have chosen the specimen in Melbourne Herbarium labelled "Sandy tracts, Shire of Borung, F. M. Reader, 29.5.1904", and as PARATYPES the several specimens (MEL) labelled "Mallee scrub, Shire of Dimboola, F. M. Reader, 20/12/1892". Comparison of this Victorian type material with



that of the Western Australian species *O. passerinoides* Benth. (*J. Drummond*, No. 371) shows it to be identical in every respect, and I have no hesitation in relegating *O. toppii* to synonymy; Bentham had already done so with F. Mueller's *Aster vernicosus* (from Mts. Barren area, W.A.). The authors of *O. toppii* state where their plant differs from *O. decurrens* Benth. (to which it really bears little resemblance); but, strangely enough, they make no reference to the much more obvious affinities with *O. passerinoides*.

The leaves in *O. passerinoides* are erect, 5–15 mm. long, narrow-linear, strongly revolute and with somewhat recurved tips; the heads are infundibuliform, rather large, and usually solitary at the extremities of slender virgate branches, while the ligulate florets number 6–10; the few short hairs on stems and foliage are completely masked by a copious resinous exudation. The Tasmanian and coastal Victorian *O. glutinosa* (Lindl.) Benth. is very closely related, but differs consistently in its longer, more spreading leaves which are narrow-linear and flat (never revolute-terete). *Eurybia glutescens* Sond. (from South Australia), which Bentham merged with this species, is in my opinion referable to *O. passerinoides* and I have never seen a South Australian specimen of the typical flat-leaved *O. glutinosa*.

***Olearia quercifolia*** Sieb. ex DC. in *Prodr. Syst. Nat.* 5: 272 (1836), non Auctt. var.

This species should be deleted from Victorian floras. It was described from Sieber's *Fl. Nov. Holl.* No. 340 which represents a plant endemic (apparently) in the Blue Mountains, N.S.W. The Victorian specimens assigned by Bentham, Mueller and Ewart to *O. quercifolia* are all referable to *O. stellulata* (Labill.) DC., var. *rugosa* (F. Muell.) Ewart, which differs in its more sharply dentate leaves (strongly reticulate and more finely stellate-hairy beneath), in the much smaller more numerous heads with tomentose (not glabrous) involucre bracts, and in the shorter, less boldly ribbed achenes.

***Olearia phlogopappa*** (Labill.) DC. in *Prodr. Syst. Nat.* 5: 272 (1836).

*Aster phlogopappus* Labill. in *Nov. Holl. Pl. Specim.* 2: 49. T.195 (1806);

*Eurybia gunniana* DC. in *Prodr. Syst. Nat.* 5: 268 (1836);

*Olearia gunniana* (DC.) Hk. f. ex Hook. in *Bot. Mag.* T.4638 (1852).

var. **FLAVESCENS** (Hutch.) J. H. Willis, *combinatio nova*.

*Olearia flavescens* Hutchinson in *Gard. Chron.* 3rd. ser. 61: 23 (1917).

*O. gunniana*, var. *flavescens* (Hutch.) Ewart in *Fl. Vict.* 1113 (1930).

var. **SUBREPANDA** (DC.), J. H. Willis, *combinatio nova*.

*Eurybia subrepanda* DC. in *Prodr. Syst. Nat.* 5: 268 (1836);

*Olearia subrepanda* (DC.) Hutch. in *Gard. Chron.* 3rd ser. 61: 24 (1917);

*O. gunniana*, var. *flavescens* (Hutch.) Ewart in *Fl. Vict.* 1113 (1930).

The name *Olearia gunniana* has been applied for many years to a common and variable species in the mountain forests of Tasmania and Victoria. But 30 years before DeCandolle published his *Eurybia gunniana*, Labillardiere had described and figured *Aster phlogopappus* which is unquestionably the same plant. A century ago, J. D. Hooker wrote [*Fl. Tas.* 1: 176 (1855)]:

An authentic specimen of Labillardiere's *Aster phlogopappa*, communicated from his herbarium by the late Mr. Webb, proves it to be the same as DeCandolle's *Eurybia gunniana*.

Hooker should have taken up the older epithet *phlogopappa* in the name of the species, and at the same time reduced *Eurybia gunniana* to synonymy. Instead, he made *phlogopappa* a variety of *E. gunniana*, and in this was followed later by Hutchinson (1917) and Ewart (1930) who put *phlogopappa* as a variety of *Olearia gunniana*. I agree with Ewart's reduction of *Olearia flavescens* Hutch. and *O. subrepanda* (DC.) Hutch. to varietal rank; but the two new combinations (as now made above) called for publication under the legitimate specific name of *O. phlogopappa*. The variety *flavescens*, of alpine country in eastern Victoria and New South Wales, departs from the typical form in its rather larger, thicker, subentire leaves (often drying yellowish beneath) and longer, stouter peduncles; Hutchinson's statement that the achenes are "quite glabrous" is not supported by an examination of duplicate type material in Melbourne Herbarium (*leg.* F. Mueller on Mt. Barkly, 1863) which shows decidedly hairy achenes. The variety *subrepanda*, also alpine, differs in having much smaller ( $\frac{1}{2}$  in. or less), somewhat obovate leaves, very short leafy peduncles and comparatively large, often solitary, flower-heads; but intergradations between both varieties and the typical form sometimes make recognition of these entities difficult. In the montane ash forests of Victoria (2000-4000 ft.) a rank-growing and very tomentose form of *O. phlogopappa* has an objectionable, almost fætid odour when crushed. Beautiful blue-flowered forms occur sometimes, as with *O. ramulosa*.

*O. stellulata* (Labill.) DC. is very close to *O. phlogopappa*, and its only significant difference would seem to be in the leaf surface, which is rugose and more scaberulous above, more coarsely and loosely tomentose beneath.